

A Middle Eastern Airport Retailer Improves Reporting with **Cloud-Based Data Warehouse and Power BI**

AWS-powered data warehouse modernization and Power BI integration helped achieve 99.9% Accuracy and Real-Time Insights



The Challenge

The client wanted to modernize their data warehouse architecture and move from the legacy reporting system to improve their reporting performance and gain real-time analytics capabilities.

Legacy reporting systems

The client was operating on legacy reporting systems with slow performance. Due to the slow report generation, decision-making was delayed.

Disparate data sources

The entire business data was spread across Microsoft Navision and SharePoint, along with other sources, requiring manual integration. These sources had structured and unstructured data, making the integration process cumbersome.

Limited analytical capabilities

The existing reporting system lacked advanced analytical capabilities and visualization tools to generate the desired reports. As a result, the entire reporting process became highly resource-intensive and cumbersome.

Lack of a scalable data warehouse

The current data warehouse lacked scalability and flexibility to accommodate the growing data. The client required a modern cloud-based data warehouse for efficient integration and processing of diverse data sources.

The Client

Established in 2019, the client is a leading airport retailer in the Middle East. It offers a customer-centric shopping experience at one of the key international airports. A workforce of over 400 members supports the client's operations. The retailer also offers online shopping experience, coupled with services like Click & Collect to order products in advance and pick them up upon arrival or departure.



Delayed reporting due to dependency on traditional data warehouse



Lack of real-time reporting capability



Limited and siloed data sources



Legacy reporting tools without any modern visualization capabilities

The Solution

Damco proposed leveraging their [Power BI consulting services](#) and implementing a comprehensive solution to modernize the client's data architecture while ensuring faster and more advanced reporting. This solution utilizes AWS services for data integration and processing, and Power BI for advanced, real-time reporting.

1 Modernization of Data Warehouse on AWS

Damco's team used AWS services to implement a modern data warehouse architecture and centralized structured and unstructured data in Amazon Redshift.

The data consolidation improved the overall data consistency and helped create a robust foundation for reporting.

2 Creation of Efficient Data Pipelines

The team developed custom data pipelines on AWS to streamline the end-to-end process of extracting, transforming, and loading data.

This enabled efficient data processing from diverse sources while ensuring that data is properly cleaned, structured, and ready for analysis.

3 Optimization of Report Loading Times

The team used pre-computed materialized views, data models, and optimized queries to reduce the report load times significantly. Reports that took longer to load were now quickly accessible to teams.

4 Migration to Power BI

The client's reporting operations were migrated to Power BI for near real-time reporting. This migration refreshed the reports every four hours, which were refreshed only once daily.

5 Consolidation and Streamlining of Reports

During the last phase, the team consolidated 107 Target-based reports into 72 highly visual Power BI reports while eliminating the redundant ones.

Out of these, twenty reports were designed in PDF format for automatic distribution via email to ensure that stakeholders have easy access to key insights.

The merger of related reports simplified the reporting process and provided more holistic insights with fewer clicks.

The Benefits

The implementation of a cloud-based data warehouse and its integration with Power BI significantly improved the reporting capabilities for the client.



Real-time and near real-time reporting capabilities with advanced visualization through Power BI.



A 70% reduction in overall report generation and loading time, ensuring timely access to key insights without any delays.



Enhanced data reliability with 99.9% accuracy rate for error-free reporting.



A 40% reduction in manual data processing efforts with automated data pipelines.



A 30% improvement in decision-making speed, resulting in improved stakeholder satisfaction.



Significant improvement in the real-time visibility into various business metrics.



Ease of data warehouse scalability to accommodate expanding data volumes.

**Discover How Power BI
Expedites Your Decision-Making
with Powerful Reporting and
Visualization Tools**

**Connect with Our
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